

Application No. 10/009,885
Filed: January 22, 2002
Group Art Unit: 3751

REMARKS

The instant Amendment is filed in response to the official action dated January 13, 2003. Reconsideration is respectfully requested.

Claims 1-13 are currently pending.

Claims 1-13 stand rejected.

Claims 1-13 have been amended.

The Examiner has rejected claims 1-13 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. As provided above, claims 1-13 have been amended to address the non-art concerns specifically identified by the Examiner.

For example, with respect to claim 6, the official action indicates that it is unclear as to what the structures of "sintered microbeads" are, and it is unclear as to what the language "localized hot-melting" of said microbeads over said thickness" is trying to claim. The element "sintered microbeads" is supported on page 10, lines 7-32, of the application.

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Specifically, the desired microporous structure of the nib is achieved through the interconnection of the various microbeads via an appropriate heat treatment method such as sintering (see page 10, lines 8-13, of the application). For example, the microbeads may be made of polypropylene (see page 10, lines 28-29, of the application). Accordingly, the Applicants respectfully submit that the structures of "sintered microbeads" are clearly described in the instant application.

Further, "localized hot-melting of said microbeads over said thickness", as recited in amended claim 6, is employed to block pores at the longitudinal outer periphery of the elongate element, as described on page 10, lines 14-21, of the application. The Applicants respectfully submit that amended claim 6 definitively recites that the pores at the longitudinal outer periphery of the elongate element are blocked, which increases the length of time it is possible to leave the nib in the open air without any effects that might prevent the writing implement from being used (see page 2, lines 12-16, of the application).

The Applicants believe that the non-art areas of rejection have been identified and addressed in the foregoing amendments to

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the claims. Accordingly, it is respectfully submitted that amended claims 1-13 satisfy the requirements of 35 U.S.C. 112 and are therefore in a condition for allowance.

The Examiner has rejected claims 1-13 under 35 U.S.C. 102(b) as being anticipated by Hori. Specifically, the official action indicates that Hori discloses a nib constituted of a segment of a coherent, elongated rod/element of high porosity polyester fiber material with at least a first end shaped to form a writing tip. The official action further indicates that the material includes pores or capillaries blocked over a limited thickness. However, the Applicants respectfully point out that an object of the Hori device and method is to eliminate non-uniformity in the fiber density in the center part of a pen core cross-section. To that end, Hori describes a dielectric heating process in which the amount of heat generation can be controlled. When heat generation is small, a resin content is made to solidify in a layer near the outer periphery of the pen core - when heat generation is large, the resin content concentrates on the center part of the pen core and solidifies there. In this way, various grades of pen cores having different hardness (e.g., from soft to hard) can be

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obtained (see column 3, lines 25-28, and column 5, lines 1-11, of Hori).

In contrast, as explained above, the Applicants seek to increase the length of time it is possible to leave a nib in the open air, without any effects that might prevent the implement from being used. To that end, pores or capillaries of the material constituting the nib are blocked over a limited thickness at the longitudinal outer periphery of the elongate element, with the exception of the writing tip end, as recited in amended claim 1. Clearly, the resin that is made to solidify at selected depths in the Hori device - from the outer periphery to the center part of the pen core - cannot operate to block the pores or capillaries of the pen core (as required in amended claim 1) because doing so would render the Hori device inoperative. The pen core of Hori having pores or capillaries blocked from the outer periphery to the center part of the core cannot operate as a useful writing implement. The Hori reference therefore fails to anticipate a nib comprising an elongate element made of high porosity material with pores or capillaries blocked over a limited thickness at the longitudinal outer periphery of the elongate element, as recited in amended claim 1. Such a nib can be used to increase the length

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of time it is possible to leave the writing implement in the open air without undesirable effects.

Moreover, with respect to amended claim 7, the Applicants respectfully point out that the step of impregnating is made on a coherent high porosity elongate element. In one embodiment, a coherent rod is formed by a tow of continuous filament or a ribbon of discontinuous fibers juxtaposed and held together (see page 5, lines 14-17, of the application). Accordingly, amended claim 7 recites the steps of impregnating and setting of a binder to obtain a coherent element, and impregnating of a sealing agent. In contrast, the Hori reference merely discloses the steps of impregnating of a binder and setting of this binder under particular conditions.

Accordingly, the Applicants respectfully submit that the rejection of claims 1-13 under 35 U.S.C. 102(b) is unwarranted and should be withdrawn.

In view of the foregoing, it is respectfully submitted that the present application is in a condition for allowance. Early and favorable action is respectfully requested.

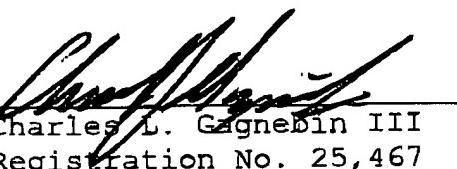
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The Examiner is encouraged to telephone the undersigned Attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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MARKED-UP VERSION OF CLAIM AMENDMENTS

1. (Amended) A nib constituted [by] of a segment of a coherent, elongate element of high porosity material, with at least a first end shaped to form a writing tip, wherein [the] pores [and/or] or capillaries of said material are blocked over a limited thickness [e] at the longitudinal outer periphery of the elongate element, with the exception of the first end forming [a] the writing tip.

2. (Amended) [A] The nib according to claim 1, wherein for an elongate element of circular cross-section, having a diameter lying in the range of 2 mm to 15 mm, the limited thickness [e] lies in the range of 0.01 mm to 1 mm.

3. (Amended) [A] The nib according to claim 1, including a sealing agent which blocks the pores [and/or] or the capillaries of said material over said limited thickness [e].

4. (Amended) [A] The nib according to claim 3, wherein the elongate element is a rod that is constituted [by] of acrylic fibers that are held together by [an MF] a melamine formaldehyde resin, and wherein the sealing agent is also [an MF] a melamine formaldehyde resin.

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5. (Amended) [A] The nib according to claim 3, wherein the elongate element is a rod that is constituted [by] of polyester fibers, and wherein the sealing agent is an acid-catalyzed melamine resin, a melamine urea-formaldehyde resin, a two-component epoxy resin, or a two-component polyurethane resin.

6. (Amended) [A] The nib according to claim 1, wherein the elongate element is constituted [by] of sintered microbeads, and wherein the pores are blocked by localized hot-melting of said microbeads over said limited thickness [e].

7. (Amended) A method of treating a coherent high porosity, elongate element designed to form [a] the nib according to claim 3, the method [consisting firstly in] comprising the steps of: continuously impregnating said elongate element with a sealing bath having a sealing agent that is inert relative to the components of the ink, impregnation being performed under conditions of viscosity, of time, of surface tensions, and of concentration in particular, such that said bath diffuses into the elongate element over a limited thickness [e] at its longitudinal periphery[,]; and

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[said method consists secondly in] setting the sealing agent.

8. (Amended) [A] The method according to claim 7, wherein the elongate element is a rod that is constituted [by] of fibers that are secured by a binder, and said binder is used as the sealing agent.

9. (Amended) [A] The method according to claim 8, wherein the rod is based on acrylic fibers, and the binding and sealing agent is an acid-catalyzed [MF] melamine formaldehyde resin.

10. (Amended) [A] The method according to claim 7, wherein the sealing agent is set by subjecting the elongate element to heat treatment.

11. (Amended) [A] The nib obtained by cutting into segments and machining a high porosity elongate element treated according to the method of claim 7.

12. (Amended) A method of treating a segment of coherent high porosity, elongate element designed to form [a] the nib according to claim 6, wherein said segment is obtained by molding and

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sintering microbeads, and said method [consists in] comprising the step of:

applying a longitudinal, peripheral, thermal shock over the segment, with the exception of the first end which forms the writing tip, so as to obtain localized hot-melting of the microbeads over a limited thickness [e].

13. (Amended) [A] The method according to claim 12, wherein the thermal shock is performed at a temperature lying in the range of 200°C to 300°C for a period of 1 [second (s)] to 10 [s] seconds.